Finally, with regard to claim 8, the combination of Frantz and Pereira fail for reasons noted above and Minegishi does nothing to remedy their deficiencies.

In view of the discussions above, it is respectfully requested that the Examiner withdraw all rejections of the claims and that the claims, as pending, be allowed.

If the Examiner is not persuafed but the Examiner has any suggestions for allowable subject matter, applicants invite the Examiner to provide any guidance she may have in this regard.

If a telephone conversation would be of assistance in advancing prosecution of the subject application, applicants' undersigned agent invites the Examiner to telephone him at the number provided.

Respectfully submitted,

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With regard to Figure 1 in Frantz, this figure seems only to refer to amounts of cationic added before the formulations and mixture became translucent and/or opaque (100% opaqueness correlating with one phase). Thus, for example, referring to Table 10 (where HECDAP is used), 2.74% HECDAP is required to achieve opaqueness/single phase stability. This does not appear to have anything to do with ranges of imidazoline from Pereira which would be used in Frantz compositions.

Thus, not only does there appear to be no obvious reason to use the imidazoline of Pereira in Frantz, but, as noted, if used, the suggestion would seem to be to use amounts larger than the upper limit of our claims.

Other Comments:

Regarding the comment at page 5, lines 15-16 of the Office Action, as noted, Figure 1 does not disclose mixtures of cationics, but rather shows how different amounts of different single cationics affect clarity or opacity. Further, as noted previously, there is no exemplification of any combination of cationics in Frantz, let alone the two specific cationics of our invention; and the amount of component 1(c), even if used, would be suggested for use at much higher levels (i.e., teach away from use at lower levels). Further, Frantz does not disclose our specific imidazoline.

The same is true for rejections of claims 3, 4, 5, 6, 7, 9 and 11 as set forth at pages 5-7 of the Office Action.

For example, looking at Example 9, it is possible to estimate the amount of dialkyl imidazoline. Thus, if the dibehenyl imidazolinium and cetrimonium in cetyl alcohol represent 2.14% w/w as 70% active, this corresponds to about 1.5% active (1.498%). If the ratio of dialkyl to cetrimonium is 7/3, as indicated, we can calculate as follows:

$$x + y = 1.498$$

$$\frac{x}{y} = \frac{7}{3}$$

$$\frac{x}{y} = \frac{1.498-y}{y} = \frac{7}{3}$$

$$4.494 - 3y = 7y$$

$$4.494 = 10y$$

$$y = 0.4494$$

x (amount of dialkyl dimonium) =
1.498 - .4494 = 1.0486

Thus, the amount of imadazoline of Pereira will be slightly above the upper limit of our invention.

More critically, however, a person of ordinary skill in the art reading Frantz would not be motivated to select a specific combination of two specific cationic surfactants (for reasons noted in points (1) and (2)) and then further combine with levels of imidazoline capped at 1%.

cationic, and clearly further does not recognize that HECDAP-type cationics (e.g., our component 1(c)) be used in minor amounts (exemplified at much higher ranges of from 0.97 to 4.32%). In fact, increasing levels of HECDAP used in Table 10 (e.g., for providing stable opaque and/or semi-translucent composition typically used in shampoos), and amounts of 3.54% (seven times as great as our 0.5%) used in Example 9 teach away from the 0.5% level of our claims.

In short, not only is the use of lower levels of component 1(c) not taught or suggested, but the Frantz reference teaches away from use of such lower levels.

Point (3):

As for the specific type and amount of imidazoline, first, as noted by the Examiner, Frantz fails to disclose such specific component.

As for the amount of imidazoline a person of ordinary skill in the art would be motivated to use based on Pereira, it is initially noted that dialkyl imidazoline quat or mixture of dialkyl imidazoline quats (versus use in combination with trimonium cationic) in Pereira are either intended to be the only cationic used (Examples 4-8); or, if used with trimonium cationic, the dimonium is the predominant species (Example 9 and 10, for example), where dialkyl imidazoline probably represents more than 1.0% by wt. cationic.

result would not have been predictable (under the standards of KSR) from a reading of Frantz. This is even further true when considering, as noted by the Examiner, that Frantz does not disclose the specific imidazoline claimed in the subject invention.

In short, the Examiner can point to no teaching of even the specific combination of components 1(a) and (c), let alone their further combination with component 1(b). Further, there is nothing that would have directed one of ordinary skill in the art to make this combination, while applicants have specifically demonstrated the combination has superior effects. Further, as noted, even had a combination of 1(a) and 1(c) been arbitrarily and fortuitously made, the active range of component 1(c) would be well above that of the upper range of the invention. Looking at Table 10, the lowest levels used are 0.97%, almost two times as high as our own upper range. This level is well above our upper level.

Point (2):

The Examiner has also suggested it would be obvious to use hydroxyethylcetyl dimonium phosphate ("HECDAP") in amounts closer to 005% upper limit of our claims.

First, as indicated above, HECDAP is used in Frantz only as a sole component, never in combination with any other cationic surfactant. Specifically, it is used in Example 9 at Table 2 (¶0046); and at Table 10 (in varying amounts) (¶0154). In Example 9, it is used at 11.5% as 30.8% active resulting in use at 3.54% active. At Table 10 it is used at levels ranging from 0.97% to 4.32% active. As such, the Frantz reference clearly does not disclose or suggest combinations of two specific types of

imidazoline of Pereira in Frantz in a range within that of our claims (0.01 to 1.0%) because Figure 1 of Frantz discloses ranges of fro 0.5% to 0.99%.

The rejection of Frantz in view of Pereira is respectfully traversed, and applicants wish to address each of the above-noted points (1)-(3) in the remarks below:

Point (1):

With regard to the comment that Frantz discloses shampoo compositions that may comprise both components of claim 1(a) (e.g., cetrimonium chloride) and component 1(c) (e.g., hydroxyethylcetyldimonium phosphate), applicants note that, while it is theoretically possible to use "a mixture of cationic surfactants" (¶0038), in no working example of Frantz is such a combination every used. Indeed, if a combination of cationic surfactants were used, there is no reason it would not comprise two different trimonium cationics versus a combination of 1(a) and (c) elements. Further, where hydroxethylcetyldimonium salt is used alone, it is used (as discussed below in more detail) in amounts at least two times (for clear solutions) or five times (for stable, opaque solutions) higher than the amount used at the upper level (0.5%) of our claims.

Further, there is no teaching and no suggestion whatsoever that the specific combination of component 1(a) and component 1(c) would have beneficial effect relative to use of one alone. Applicants, by contrast, have clearly demonstrated at page 26 of the specification (Example 1 versus Comparative Example A) that use of small amounts of hydroxyethyl cetyldimonium salt yield superior conditioning and feel. This

REMARKS

Initially, applicants note the previous rejections under 35 USC §101, 35 USC §112 and 35 USC §103 have been withdrawn.

At page 3 of the Office Action, the Examiner has newly rejected claims 1-7, 9 and 11 under 35 USC §103(a) as allegedly unpatentable over U.S. Publication No. 2003/0190302 to Frantz et al. (hereinafter, "Frantz") in view of U.S. Publication No. 2003/0186834 to Pereira et al. (hereinafter, "Pereira").

With regard to Frantz, the Examiner essentially makes the following points:

1) Frantz is said to disclose shampoo formulation comprising cetrimonium chloride (at 0.96%) and hydroxyethylcetyldimonium phosphate (at 0.97%);
2) Although the amount of hydroxyethyl cetyldimonium phosphate is "slightly higher" than the upper limit of our claims (which is 0.5%), it would be *prima facie* obvious to use lower amounts since the compound would be expected to have the same properties and, presumably, lower ranges are the result of optimization and routine experimentation; and
3) Imazoline derivatives are broadly disclosed (¶0061 of Frantz) and, although Frantz does not specifically teach di-(C_{20}-C_{24}) imidozoline quat, this deficiency is allegedly cured by the combination with Pereira. The Examiner further suggests that it would be obvious to use the